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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/578,585	03/02/2007	Larry Lapanashvili	081553-000000US	1736
20350 7590 03/17/2010 TOWNSEND AND TOWNSEND AND CREW, LLP TWO EMBARCADERO CENTER EIGHTH FLOOR SAN FRANCISCO, CA 94111-3834				
EXAMINER				
LAVERT, NICOLE F				
ART UNIT		PAPER NUMBER		
3762				
MAIL DATE		DELIVERY MODE		
03/17/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/578,585

**Applicant(s)**

LAPANASHVILI ET AL.

**Examiner**

NICOLE F. LAVERT

**Art Unit**

3762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-24 and 38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-24 and 38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 3/2/07
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(c), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(c) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 17 February 2010 has been entered.

***Claim Rejections - 35 USC § 112***

2. Claims 18-24 & 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 18 recites the limitation "the T-wave" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. **Claims 18-24 & 38** are rejected under 35 U.S.C. 103(a) as being unpatentable over Krikorian (US 4,541,417) and one of ordinary skill in the art.

Krikorian discloses an electrotherapy apparatus (e.g., col 2, ln 43-52) comprising a sensor (e.g., element 14) for detecting recurring signal peaks, a processor (e.g., via the disclosed timer, 15, & the disclosed delay circuit, 136) for deriving a time delay corresponding to the end of the T-wave [e.g., (col 9, ln 12-21) & (Fig 3)]; a trigger system or circuit (e.g., element 16) initiated by an output signal of said processor for applying electrical stimulation to one or more active electrode at a derived time delay related to end of said time delay, in synchronization with the heart rhythm in the counterpulsation mode [e.g., (col 4, ln 9-21 & 46-68)-(col 5, ln 1-14), (col 9, ln 37-45) & (Figs 1 & 6); the processor being adapted to make a determination for successive pairs of signal peaks of a value corresponding to the time between said successive pairs of signal peak; to compare said value with a max and min permissible technical limit (e.g., via the disclosed comparator, 142, pf the trigger/control circuit, 16); to trigger said trigger system when a favourable comparison is determined [e.g., (col 7, ln 27-68)-(col 8, ln 1-5) & (col 9, ln 46-49)], to close and/or open a measurement window for said sensor (e.g., via disclosed switch, 17, that control the output of the sensing means), once said comparison is made, in which the window time is equal to a time delay plus a safety margin {e.g., Fig 3a, 'SS + (Td-Tb)} [e.g.,

(col 4, ln 16-21 & 46-52) & (col 5, ln 8-14)]; to calculate a max stimulation length (e.g., based on adjustment to produce pulses on every other 'n' heart beat before next 'R' peak arrives, see Fig 3); to revise the derived time delay (e.g., element Td) if necessary to check that the derived time delay is less than or equal to said max stimulation length [e.g., (col 5, ln 8-14, to calculate a max duration [e.g., (col 5, ln 8-14), (col 8, ln 62-68)-, and to send an output signal to said trigger system during said measurement window and open said measurement window at the recognition of the detection of a further peak of said electrogram by said sensor [e.g., (col 5, ln 8-14), (col 8, ln 62-68)-(col 9, ln 1-49)].

Krikorian discloses the claimed electrotherapy apparatus having processor adapted to compare and make a determination of a value corresponding to the time between successive pairs of signal peaks and to additionally calculate a max stimulation length, except wherein said apparatus further comprises making a determination by determining whether said value exceeds and/or is less than a preceding value averaged over a plurality of heart beats by more than a defined amount. It would have been obvious to one having ordinary skill in the art to have modified the apparatus as taught by Chou with determining if a time delay value exceeds/and or is less than a preceding value averaged since it is known in the art that the above determination would provide the predictable results pertaining to utilizing a threshold setting used for only obtaining optimal pulses measured by a sensor so as to calculate an adjustable time delay responsive from said pulse in order further provide a certain amount of counterpulsation which induces blood to flow into the coronary arteries and to increase the venous return thus invoking pumping assistance to the heart (e.g., Krikorian, col 9, ln 37-45).

***Response to Arguments***

7. Applicant's arguments with respect to claims 18-24 & 38 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICOLE F. LAVERT whose telephone number is (571)270-5040. The examiner can normally be reached on M-F 7:30-5:00p.m. (alt. fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George R Evanisko/  
Primary Examiner, Art Unit 3762

/Nicole F. LaVert/  
Examiner, Art Unit 3762

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